

REMARKS/ARGUMENTS

Claim Amendments

The Applicants have amended claims 1, 3-5, 7-13, 15-17, and 19-22; no claims have been canceled or added. Applicants respectfully submit no new matter has been added. Accordingly, claims 1-22 are pending in the application. Favorable reconsideration of the Application is respectfully requested in view of the foregoing amendments and the following remarks.

Examiner Objections - Claims

Claims 5 and 7 were objected to because of informalities. Applicants appreciate the Examiner's thorough review of the claims. The Applicants have amended the claims in order to correct the informalities. Specifically, claim 5 has been amended to delete the term "the selected packets" in favor of the more accurate "the at least one data packet", which of course refers to the at least one data packet selected for retransmission that is recited in claim 1. Claim 7 has been clarified by deleting the unnecessary text following "further calculation of the delay budget" (which text contained the objected-to "first data packets"). These grounds for objection are believed to be overcome by the described amendments, and the Examiner's consideration of the amended claims is respectfully requested.

Claim Rejections – 35 U.S.C. § 112

Claim 8 stands rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter of the invention. In response, Applicants have corrected claim 8 to recite that the "delay budget is updated . . ." (rather than "adapted"). As stated, for example, in paragraphs [0052] and [0059] of the Application, an update is necessary in certain circumstances. Note that claim 8 does not recite exactly *how* the update is to be performed. A detailed explanation of delay-budget computation is set forth, however, in paragraphs [0056] *et seq.* In view of this amendment, Applicants believe that this ground for rejection has been overcome.

Claim Rejections – 35 U.S.C. § 101

Claims 13-22 stand rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. In order to advance prosecution of this Application, and without traversing or acquiescing in the stated rejection, Applicants have amended claim 13 to recite that the computer program product resides in a physical computer-usable medium. Applicants believe that this amendment explicitly limits the scope of the claim to programs in physical media. Claims 14-22 depend directly or indirectly from claim 13 and are therefore also limited to this extent. It is noted that this amendment is not made to distinguish the claims from the prior art. In light of this amendment, Applicants believe that this ground for rejection has also been overcome.

Claim Rejections – 35 U.S.C. § 102(e)

Claims 1-8, 10, 12-20 and 22 stand rejected under 35 U.S.C. § 102(e) as being anticipated by Radha et al. US Pat No. 6,700,893B1. Applicants respectfully traverse. Each of the independent claims requires that a comparison be made between a delay requirement and a delay budget, and then retransmitting data packets according to the result of the comparison. Radha fails to disclose determining a delay budget, as that term is used in the present Application, and so it cannot anticipate the claims as currently recited. In addition, the independent claims have been amended to clarify that retransmitting is performed selectively, depending on the result of the comparison between the delay budget and the delay requirement. That is, the retransmission may be omitted if the result of the comparison indicates. (*See, for example*, the Application at paragraphs [0017] and [0053] -- noting that the Application paragraph numbers, where cited, refer to the published version of the Application, US 2006/0112168 A1.) Where the present invention is embodied at a receiver, according to one embodiment, no indication to retransmit packets is sent, even for packets not correctly received, if the comparison indicates that no retransmission of those packets should take place (paragraph [0034]). As should be apparent from these sections of the Application,

adding the word “selectively” to these features is a clarification, not a change in the scope of the claims.

With regard to this latter (selective-retransmission) feature, it is noted that Radha does not teach or disclose intentionally omitting retransmission of certain data packets even though they have not been properly received. This is not unexpected, as the focus of Radha is minimizing the number of duplicate data packet retransmissions (*see, for example*, Radha at col. 2, lines 42-47 and col. 3, line 1-8). This goal is sought, for example in Radha claim 1, by adjusting a temporal boundary to advance or retard the transmission of retransmission requests. While this approach is not without value, it is not the approach taken by the present invention. The approach of the present invention, which avoids retransmitting, or in some embodiments even avoids requesting retransmission, when indicated by the comparison of a delay budget and a delay requirement, frees up even more resources for the transmission of data packets.

As the term is used in the present Application, the delay budget is indicative of transmission capacity in a certain sense, that sense being the capacity for making retransmissions without the transmission of first (not previously-transmitted) data packets beyond their presentation time (paragraph [0016]). The presentation time, in turn, corresponds to the latest time when a first data packet must arrive at the receiver to be processed and, in the case of a final receiver in a transmission, presented by the application (paragraph [0014]). The delay budget calculation preferably takes into account the individual delay budgets for a number of first data packets (paragraphs [0022] and [0023]). The delay budget of the present invention is intended to be reduced after a retransmission to account for the delay caused by the retransmission (paragraph [0064]).

Radha does not describe a delay budget calculated in this manner (despite the similarity in terms). Instead, Radha used a ‘delay budget’ value that takes into account the time needed for determining that a packet is lost and the time for recovering lost packets through the retransmission process. (See col. 12, lines 52-60.) (Note that a minimum value may be calculated using a start-up delay and a buffering delay (col. 12, lines 38-43).)

In the present Application, the delay requirement for the retransmission of a selected data packet is calculated from the limit of the transmission capacity and from the transmission capacity required for the selected data packet (paragraph [0016]). The delay requirement, according to independent claims 1 and 12-13, is compared to the delay budget. The retransmission of the selected data package is (selectively) executed according to the result of the comparison, that is, the selected data packet is only retransmitted if the delay budget is at least equal to the delay requirement. If this condition is not met, the retransmission does not occur (paragraph [0017]). Radha does not teach or suggest selective retransmission based on a comparison of delay requirement and delay budget, as those terms are used in the present Application.

In summary, the cited reference Radha does not disclose determining a delay budget as that value is calculated in the context of the present Application, and therefore also does not teach a comparison of the delay budget with a delay requirement and selective retransmission according to the result of the comparison.

Claims 2-8, 10, 14-20, and 22 depend directly or indirectly from a respective one of independent claims 1 and 13, and are therefore also distinguishable from the cited art for the reasons set forth above.

Various of the claims have been amended for clarity and consistency of claim language.

For the reasons set forth above, Applicants respectfully suggest that this ground for rejection has been overcome. The Examiner's consideration of the amended claims is respectfully requested.

Claim Rejections – 35 U.S.C. § 103 (a)

Claims 9 and 21 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Radha in view of Hackenberg et al (US Patent No. 6,792,470B2). Claims 9 and 21 depend from amended claims 1 and 13, respectively, and are therefore also distinguishable from the cited art for the reasons set forth above.

Claim 11, an independent claim, stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Radha. Claim 11, however, is distinguishable from the Radha

for reasons analogous to those give above in respect to independent claims 1, 12 and 13. Namely, Radha does not disclose determining a delay budget as that value is calculated in the context of the present Application, and therefore also does not teach a comparison of the delay budget with a delay requirement and selective retransmission according to the result of the comparison. Hackenberg does not supply any of these missing features. For the reasons set forth above, Applicants respectfully suggest that this ground for rejection has also been overcome. The Examiner's consideration of the amended claims is respectfully requested.

Prior Art Not Relied Upon


In paragraph 6 on page 9 of the Office Action, the Examiner stated that the prior art made of record and not relied upon is considered pertinent to the Applicant's disclosure.

CONCLUSION

In view of the foregoing remarks, the Applicant believes all of the claims currently pending in the Application to be in a condition for allowance. The Applicant, therefore, respectfully requests that the Examiner withdraw all rejections and issue a Notice of Allowance for all pending claims.

The Applicant requests a telephonic interview if the Examiner has any questions or requires any additional information that would further or expedite the prosecution of the Application.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Sidney L. Weatherford", written in a cursive style.

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